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ABSTRACT

The relationship between job scope and job satisfaction was examined for a sample of urban, predominantly blue-collar, employees. Incumbents in sixteen jobs provided data on job characteristics (N=164) and job satisfaction (N=593). Rank-order correlation coefficients were computed between mean job scope indices and mean job satisfaction levels for the sixteen jobs. Results showed that job scope indices (e.g., variety, autonomy, etc.) were positively related to satisfaction with the "work itself." Implications of these findings for the Hulin and Blood (1968) model relating job level, job satisfaction, and alienation from middle-class work norms and values were discussed. (Author)

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JOB SCOPE AND JOB SATISFACTION: A STUDY OF URBAN WORKERS

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13. ABSTRACT

The relationship between job scope and job satisfaction was examined for a sample of urban, predominantly blue-collar, employees. Incumbents in sixteen jobs provided data on job characteristics (N = 164) and job satisfaction (N = 593). Rank-order correlation coefficients were computed between mean job scope indices and mean job satisfaction levels for the sixteen jobs. Results showed that job scope indices (e.g., variety, autonomy, etc.) were positively related to satisfaction with the "work itself." Implications of these findings for the Hulin and Blood (1968) model relating job level, job satisfaction, and alienation from middle-class work norms and values were discussed.

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Job Scope and Job Satisfaction:

A Study of Urban Workers

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The relationship between job scope and job satisfaction has been examined recently by a number of investigators (Alderfer, 1967; Argyris, 1959; Armstrong, 1971; Beer, 1968; Bishop & Hill, 1971; Blauner, 1964; Centers, 1958; Centers & Bugental, 1966; Conant & Kilbridge 1964; Cummings & ElSalmi, 1970; Hackman & Lawler, 1971; Hall & Lawler, 1970; Kennedy & O'Neill, 1958; Kilbridge, 1960, 1961; Kirsch & Lengermann, 1972; Lawler & Hall, 1970; Sexton, 1967; Shepard, 1969, 1970, 1973; Svetlik, Prien, & Barrett, 1964; Walker & Guest, 1952; Walker & Marriott, 1951). A review of this literature (covering the period 1929-1967) by Hulin and Blood (1968) led them to conclude that:

> . . . the positive relationship between job size and job satisfaction cannot be assumed to be general but rather is dependent to a great extent on the backgrounds [urban or rural] of the workers in the sample [studied] [p. 41].

The Hulin and Blood formulation is closely related to work previously done by Turner and Lawrence (1965). These latter researchers conducted a study in which relationships among job satisfaction, several "task attribute" indices, and a Requisite Task Attribute (RTA) index were examined. In an initial analysis, the relationship between RTA scores and job satisfaction was calculated using the study's entire sample (combined "town" and "city" workers). This analysis showed that there was no "significant association between job satisfaction and RTA index scores (p. 49)." In a subsequent

analysis, the researchers partitioned the sample on the basis of where individuals lived (i.e., urban or rural settings). Here it was discovered that: (1) for workers from rural (town) environments RTA scores were positively related to job satisfaction, and (2) for workers from urban (city) environments RTA scores were negatively related to job satisfaction. As will be shown, the negative relationship between job scope and job satisfaction (suggested by the work of Turner and Lawrence) for a group of "city" workers was not found in the present study.

Building upon these results and an analysis of previous research, Hulin and Blood (1968) posited the operation of "alienation from middle-class work norms" as a moderator of the job scope-job satisfaction relationship. More specifically, they hypothesized that: (1) where there is low "alienation from middle-class work norms" job satisfaction and job level will relate positively to one another, and (2) where there is a high degree of "alienation from middle-class work norms" job level and job satisfaction will relate negatively to one another. Although not explicitly stated, their discussion (p. 51) suggests that where there is neither "integration with" nor "alienation from" middle-class work norms, the relationship between job level and job satisfaction will be weak or non-existent. Stated differently, they hypothesize that the degree to which one is either "alienated from" or "integrated with" middle-class work norms will influence the impact of job scope (stimulus variable) on job satisfaction (response variable).

In the present study, the relationship between job scope and job satisfaction was examined. Since the present study's sample was composed entirely of individuals who both resided and worked in urban areas, it was predicted, on the basis of the Hulin and Blood model, that negative

relationships between job scope indices and job satisfaction measures would be obtained. Alienation from middle-class work norms is, in the opinion of Blood and Hulin (1967), "fostered by industrialized, socially heterogeneous, metropolitan conditions (p. 285)." And, "alienated workers should report lower satisfaction on highly skilled jobs [than on jobs of lower skill levels] [p. 284]." From the above, it is clear that given the nature of the present study's sample, negative relationships should reasonably be predicted to obtain between job scope and job satisfaction. As will be shown, such negative correlations were not found in the present study.

Method

Samples

Data reported here were obtained from blue- and white-collar employees in one division of a California-based telephone company. Individuals supplying data held one of the following jobs: (1) Deskman, (2) PBX Installer, (3) PBX Repairman, (4) Station Installer, (5) Station Repairman, (6) Line Assigner, (7) Supplyman, (8) Messenger, (9) Building Mechanic, (10) Splicer, (11) Lineman, (12) Central Office Equipmentman, (13) Frameman, (14) Plant Service Clerk, (15) Plant Reports Clerk, and (16) Reports Clerk. Of the (approximately) 1000 individuals asked to participate in the study 605 agreed to do so and were administered a battery of questionnaires during the months of June and July of 1971. Two groups of respondents were eliminated from the sample for subsequent analyses. Analysis Clerks were deleted because of the small number (N = 3) of respondents with this job title. Another group (N = 9) was eliminated because individuals in it provided attitudinal data but not their job title. The total sample was thus reduced to 593 individuals.

Job characteristics data were collected several months after the

attitude data had been obtained. An attempt was made to obtain ratings of job characteristics from at least five incumbents in each of the sixteen job groups. A total of 164 ratings were obtained from incumbents in the sixteen jobs.

(Ratings of the jobs were also obtained from managerial personnel (supervisor ratings) familiar with the jobs studied and relevant non-managerial personnel (peer ratings). Rankings of the jobs by the three sources (incumbents, supervisors, and peers) proved to be very similar (as indicated by high coefficients of concordance when rankings of the sixteen jobs on each of the dimensions by the three ratings sources were compared). Coefficients of concordance for the various dimensions were .87 ($p<.001$) for variety, .76 ($p<.01$) for autonomy, .64 ($p<.02$) for task identity, .58 ($p<.05$) for feedback, .46 ($p<.20$) for friendship opportunities, .75 ($p<.01$) for dealing with others, .82 ($p<.01$) for prestige (craft job reference group), and .78 ($p<.01$) for prestige (all jobs reference group). Given the generally high level of agreement among the three rater groups it was decided to use incumbents' ratings in all analyses. Additional justification for the use of "perceived" job characteristics is offered by Hackman and Lawler (1971, pp. 281-282).)

The sixteen jobs studied varied considerably in a number of respects (e.g., work performed, degree to which incumbents work with others, closeness of supervision received, etc.). Some jobs (e.g., PBX Installer, PBX Repairman, Station Installer, Station Repairman, etc.) are designed in such a way as to permit incumbents to act autonomously for great portions of the average workday. Other jobs (e.g., Splicer, C. O. Equipmentman, Line Assigner, etc.) involve tasks in which employees must work in close contact with others throughout a normal workday. The jobs also differ considerably in prestige. (Data on the prestige of jobs studied is pre-

sented below.) Prestige (status) of jobs corresponds closely to the ranking of jobs along an "entry-level"-"terminal" job continuum. "Entry-level" positions are, generally, low on prestige while "terminal" jobs are of higher prestige (and skill-level). "Promotion" within the ranks of the organization's non-managerial positions occurs through movement from low prestige, low skill level, positions to those of greater prestige and greater skill level. The only possible "promotion" from a "terminal" craft job results from the offer and acceptance of a first-level supervisory position (i.e., a "foreman" position).

Instruments

Job satisfaction was measured with the Job Descriptive Index (JDI) developed by Smith, Kendall, and Hulin (1969). Several aspects of job satisfaction are measured by the JDI; these are (1) satisfaction with the work itself, (2) satisfaction with pay, (3) satisfaction with promotion prospects, (4) satisfaction with supervision, and (5) satisfaction with co-workers. According to its developers:

> . . . the JDI . . . as a measure of job satisfaction . . . is directed toward specific areas of satisfaction rather than global or general satisfaction. Several different areas of job satisfaction must be measured separately if any substantial understanding [of job satisfaction] is to be achieved [Smith, et al., p. 70].

Scores on each of the JDI's subscales have a range of 0 (indicative of relatively low satisfaction) to 54 (indicative of relatively high satisfaction). (Scoring is discussed in Smith, et al., 1969, pp. 82-84).

Job characteristics data were obtained with a slightly modified version of an instrument reported in the Hackman and Lawler (1971) study. The instrument was designed to elicit ratings of jobs (along a seven point

scale) on each of eight characteristics. The eight characteristics are: (1) variety, (2) autonomy; (3) task identity, (4) feedback, (5) friendship opportunities, (6) dealing with others, (7) prestige of the job when compared with other non-supervisory jobs in the division, and (8) prestige of the job when compared with all other jobs in the division. A typical item from the instrument is shown below:

> How much variety is there in your job?
> Very little; I do pretty much the same things over and over and use the same pieces of equipment and procedures almost all of the time. (Scored 1)
> Moderate variety. (Scored 4)
> Very much: I do many different things and use a variety of equipment and procedures. (Scored 7).

Because the instrument is described in the Hackman and Lawler (1971) monograph it is not elaborated upon here. It should be noted here, however, that since the instrument has its origins in the Turner and Lawrence (1965) investigation of workers' attitudinal responses to their jobs, its use here as an index of job scope is appropriate. In particular, the four "core" dimensions (variety, autonomy, task identity, and feedback) which served as components of Turner and Lawrence's RTA index seemed to be ideal indices of job scope for use in the present study.

Scores along each job characteristic ranged from 1.0 (indicating a relatively low degree of the characteristic) to 7.0 (indicating a relatively high degree of the characteristic). Large scope jobs are, for the purposes of this paper, considered to be those relatively high on the four core dimensions. Job scope varies from small (job rated 1 on all core dimensions) to large (jobs rated 7 on all core dimensions).

Analyses and Results

As a consequence of having collected the job characteristics data anonymously, it was not possible to relate job characteristics to attitudes at the level of the individual. Instead, the analysis was conducted at the level of the job (for the sample of sixteen jobs).

Job Characteristics. Mean scores were computed for each job on the eight job characteristics indices. Table 1 shows these means and ranks of the sixteen jobs on the variables studied. Ranks shown are based upon an ordering of jobs along a high to low continuum for each of the variables

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Insert Table 1 About Here

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shown. The job of Plant Reports Clerk, for example, ranks first on variety as a result of its mean (6.38) on this variable, while the job of Supplyman ranks sixteenth as a consequence of its low (3.00) mean score on the variety dimension. As can be seen, some jobs (e.g., PBX Installer and Station Repairman) have relatively large scope while others (e.g., Supplyman and Lineman) have relatively small scope.

Rank-order correlations were computed to assess the degree to which ordering of jobs along the various dimensions agreed with one another. These correlations are shown in Table 2. As can be seen, jobs high on the

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Insert Table 2 About Here

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variety dimension also tend to be high on autonomy, task identity, feedback, dealing with others, and prestige. Interestingly, jobs with high variety

provide incumbents with relatively little opportunity to interact informally with others (friendship opportunities). This is understandable given the nature of many high variety jobs (e.g., PBX Installer, Station Repairman, etc.). These jobs are, generally, performed by workers who operate away from their work units (i.e., in the "field"). The low variety jobs, on the other hand, are generally performed by individuals who have close contact with co-workers throughout a normal workday and thus have opportunities to interact informally with others if they so desire.

Note that while prestige (craft reference group) was shown to relate highly to variety and autonomy, its relationship to task identity was considerably lower. This suggests that (for at least the organization studied) variety and autonomy of a job are of far greater importance in it being seen as a prestigious job than are task identity (doing a whole job) or feedback. Assuming that prestige is an "appropriate" index of job scope, then variety and autonomy appear to be the job characteristics that best relate to scope.

Since the principal concern of this paper is with the four core dimensions (variety, autonomy, task identity, and feedback), additional discussion concerning the other four variables (friendship opportunities, dealing with others, etc.) is not presented here.

Job Satisfaction Indices

Mean scores on each of the five JDI subscales were computed for each job. These are shown in Table 3. Given the focus of this paper (job

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scope and satisfaction with work) the JDI "work itself" subscale means for

the sixteen jobs are of greatest import. (The other subscale means are briefly treated below, however.) As can be seen, satisfaction with the "work itself" is highest for such jobs as Deskman, PBX Installer, PBX Repairman, and Station Repairman and lowest for such jobs as Supplyman, Frameman, and Central Office Equipmentman. (As will be demonstrated below, job scope indices correlate highly with the JDI "work itself" subscale.)

Table 4 shows intercorrelations based upon the rankings of the sixteen jobs on the five JDI's subscales. Satisfaction with the "work itself" is unrelated to satisfaction with supervision, positively related

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to satisfaction with co-workers (r_s = .41) and negatively related to satisfaction with both pay (r_s = -.38) and promotion prospects (r_s = -.54).

From data shown in Tables 3 and 4 it should be obvious that satisfaction with one aspect of a job does not necessarily imply satisfaction with other aspects. The job of Deskman, for example, ranks first on satisfaction with the work itself but twelfth on satisfaction with co-workers, eleventh on satisfaction with pay and fourteenth on satisfaction with promotion (Table 3). On the other hand, the job of Messenger ranks first on satisfaction with supervision, pay, and promotion but twelfth on satisfaction with the "work itself." These data account for the negative relationships found between satisfaction with the "work itself" and satisfaction with pay and promotion. In sum, satisfaction with one aspect of a job need not generalize to other aspects.

Job Characteristics - Job Satisfaction

Table 5 shows rank-order correlations among the eight job dimensions and the five JDI subscales. Note that the N for these correlations is sixteen (as was the case for entries in Tables 2 and 4). Entries in the table resulted from relating ranks of the sixteen jobs on the job dimensions to ranks of the jobs on the five measures of satisfaction.

Satisfaction with the "work itself" is highly related to variety, autonomy, friendship opportunities, and prestige. Interestingly, the other two core dimensions (task identity and feedback) are only weakly related to this satisfaction index. Satisfaction with the "work itself" is greater on prestigious than on non-prestigious jobs. Prestige (craft worker reference group) correlates .50 ($p < .05$) with JDI "work itself." Apparently, prestige (at least in the organization studied) is strongly related to the skill levels of the various jobs. Supporting this is the fact that prestige correlated highly with variety ($r_s = .75$) and with autonomy ($r_s = .70$). These two dimensions appear to be fairly accurate indices of the skill levels associated with the jobs studied. Satisfaction with the "work itself" is not strongly related to the "dealing with others" dimension. The two variables only share about 12% of common variance.

Since the focus of this paper is on satisfaction with the work itself and its relationship to various job characteristics, the other JDI dimensions receive only brief comment below.

JDI supervision correlates .57 ($p < .05$) with feedback; jobs for which adequate feedback is provided are also jobs for which satisfaction with supervision is greatest. Interestingly, satisfaction with supervision is

not strongly related to any of the other core dimensions. JDI co-workers is negatively related to friendship opportunities ($r_s = -.64$, $p < .01$). While, at first glance, this negative relationship might appear unreasonable, it is easily explained. The JDI co-workers subscale measures satisfaction with co-workers. The friendship opportunities dimension, on the other hand, is an index of the degree to which an individual can talk to other employees while at work about non-work matters. Individuals with the opportunity for such on-the-job informal interaction are apparently not as satisfied with co-workers as are those without opportunities to interact informally. A possible explanation of this is that individuals who interact with others informally while at work have a basis not only for deriving satisfaction from such interactions but also have a basis for experiencing dissatisfaction from these episodes. The point worthy of emphasis here is that the opportunity to interact need not be accompanied by "positive" feelings about such interaction. Consistent with the adage "familiarity breeds contempt," extensive interaction with co-workers may result in diminished rather than increased liking for them.

JDI pay is moderately related to feedback ($r_s = .51$) and friendship opportunities ($r_s = .50$). It relates negatively to variety, autonomy, and prestige (craft reference group). These latter correlations suggest, however, that individuals with high skill jobs ("terminal" craft positions) are relatively dissatisfied with their pay when compared with individuals in jobs of lower than average skill levels ("entry-level" craft positions). This obtains in spite of the fact that individuals in jobs requiring higher skill levels are paid more than those holding entry-level positions.

JDI promotion prospects is negatively related to variety, autonomy,

prestige, and dealing with others. Those in "terminal" craft jobs (e.g., PBX Repairman, Deskman, etc.) are least satisfied with promotion prospects, while those in "entry-level" jobs (e.g., Messenger, Frameman, Supplyman, etc.) are most satisfied with promotion prospects. The JDI promotion prospects subscale assesses what might be termed "perceived promotion opportunities" to a far greater degree than it does individuals' affective responses to promotion experiences in an organization. Individuals in the "terminal" craft jobs have no possibility of being promoted to a higher skill level blue-collar job. Movement from "terminal" craft jobs to a first-level supervisory position is the only route available and the possibilities for such advancement are, apparently, not perceived as being very high. Individuals in "entry-level" craft jobs, on the other hand, perceive ample opportunity to move to jobs of higher skill levels if they remain with the organization.

Discussion

In this study an urban, predominantly blue-collar, sample provided data on job satisfaction and job characteristics. Results showed that indices of job scope (e.g., variety, autonomy, etc.) were positively and significantly related to satisfaction with the "work itself." Contrary to what is suggested by the Hulin and Blood (1968) model those members of this sample of urban employees who worked on jobs of larger scope did not experience greater dissatisfaction with work. Recall that, according to Blood and Hulin (1967), "alienated workers [i.e., blue-collar workers in urban areas] should report lower satisfaction [with work] on highly skilled jobs [than on jobs of lower skill levels][p. 284]." It should also be noted that although negative correlations were found between scope indices and some JDI subscales (e.g., pay and promotion prospects), such

correlations cannot be interpreted as evidence supportive of the Hulin and Blood model since the model is concerned with satisfaction with work.

Results of a study by Hackman and Lawler (1971) also demonstrated that large scope jobs were more satisfying than small scope jobs. General job satisfaction was reported (p. 276) by them to correlate .38 ($p < .05$) with variety, .39 ($p < .05$) with autonomy, .20 ($p < .05$) with task identity, and .28 ($p < .05$) with feedback. Consistent with these results, job satisfaction was found to be significantly higher for individuals on jobs high on all the core dimensions than for individuals on jobs low on all the core dimensions (p. 277). As can be seen, these results are not supportive of the Hulin and Blood model.

It would appear, therefore that the model presented by Hulin and Blood is too simple to account for the impact of job scope on job satisfaction. Job satisfaction can be thought of as either a global construct that defines the general affective orientation of an individual to his job and the factors he associates with it (e.g., co-workers, pay, promotion, working conditions, etc.) or it can be viewed from the standpoint of each of its components. Satisfaction with the work itself need not be accompanied by satisfaction with other job factors (e.g., satisfaction with pay). For example, the data in Table 3 indicated that while Deskmen had the highest degree of satisfaction with the work itself, they had relatively low satisfaction with co-workers, pay, and promotion. Messengers, on the other hand, were most satisfied with pay, promotion, and supervision but were relatively dissatisfied with the work itself. On an overall measure of job satisfaction, therefore, Messengers might rank above Deskmen. Such a result would support the Hulin and Blood thesis that "alienated" workers should report lower satisfaction on highly skilled (e.g., Deskman) jobs

than on jobs of lesser skill levels (e.g., Messenger). The higher overall satisfaction of messengers, however, would result from attitudes about pay, promotion, and supervision, not from feelings about the work itself. From the above, it would appear that the advocates of job enrichment are correct: job scope is positively associated with job satisfaction when job satisfaction is viewed as satisfa tion with the work itself.

Given the findings of the present study the need for more research on the job scope-job satisfaction relationship is apparent. A laboratory or field study in which individuals were first equated on their degree of "alienation from middle-class norms" and then randomly assigned to jobs that differed in scope would be an appropriate first effort. After the individuals had worked at their respective jobs for a period long enough to form attitudinal reactions, job satisfaction could be assessed. Such a study would be one way to test conclusively the Hulin and Blood model. If workers who were "alienated" from middle-class work norms experienced relative dissatisfaction with the work itself on large scope jobs (when compared with a group matched on norms but assigned to small scope jobs) then the model proposed by Hulin and Blood would have been shown to have predictive value. If, on the other hand, more satisfaction was experienced on high-scope rather than on low-scope jobs, revision of the model would be suggested.

References

Alderfer, C. P. An organizational syndrome. Administrative Science Quarterly, 1967, 12, 440-460.

Argyris, C. The individual and organization: An empirical test. Administrative Science Quarterly, 1959, 4, 145-167.

Armstrong, T. B. Job content and context factors related to satisfaction for different occupational levels. Journal of Applied Psychology, 1971, 55, 57-65.

Beer, M. Needs and need satisfaction among clerical workers in complex and routine jobs. Personnel Psychology, 1968, 21, 209-222.

Bishop, R. C. & Hill, J. W. Effects of job enlargement and job change on contiguous but nonmanipulated jobs as a function of workers' status. Journal of Applied Psychology, 1971, 55, 175-181.

Blauner, R. Alienation and freedom: The factory worker and his industry. Chicago: University of Chicago Press, 1964.

Blood, M. R. & Hulin, C. L. Alienation, environmental characteristics, and worker responses. Journal of Applied Psychology, 1967, 51, 284-290.

Centers, R. Motivational aspects of occupational stratification. Journal of Social Psychology, 1948, 28, 187-217.

Centers, R. & Bugental, D. E. Intrinsic and extrinsic job motivations among different aspects of the working population. Journal of Applied Psychology, 1966, 50, 193-197.

Conant, E. H. & Kilbridge, M. D. An interdisciplinary analysis of job enlargement: Technology, costs, and behavioral consequences. Industrial and Labor Relations Review, 1965, 18, 377-395.

Cummings, L. L. & ElSalmi, A. M. The impact of role diversity, job level, and organizational size on managerial satisfaction. Administrative Science Quarterly, 1970, 15, 1-10.

Hackman, J. R. & Lawler, E. E., III. Employee reactions to job characteristics. Journal of Applied Psychology, 1971, 55, 259-286.

Hall, D. T. & Lawler, E. E. Job characteristics and pressures and the organizational integration of professionals. Administrative Science Quarterly, 1970, 15, 271-281.

Hulin, C. L. & Blood, M. R. Job enlargement, individual differences, and workers responses. Psychological Bulletin, 1968, 69, 41-55.

Kennedy, J. E. & O'Neill, H. E. Job content and workers' opinions. Journal of Applied Psychology, 1958, 42, 372-375.

Kilbridge, M. D. Do workers prefer larger jobs? Personnel, 1960, 37, 45-48.

Kilbridge, M. D. Turnover, absence and transfer rates as indicators of employee dissatisfaction with repetitive work. Industrial and Labor Relations Review, 1961, 15, 21-32.

Kirsch, B. A. & Lengermann, J. J. An empirical test of Robert Blauner's ideas on alienation in work as applied to different type jobs in a white-collar setting. Sociology and Social Research, 1972, 56, 180-194.

Lawler, E. E., III, & Hall, D. T. Relationship of job characteristics to job involvement, satisfaction, and intrinsic motivation. Journal of Applied Psychology, 1970, 54, 305-312.

Sexton, W. Organization and individual needs: A conflict? Personnel Journal, 1967, 46, 337-343.

Shepard, J. M. Functional specialization and work attitudes. Industrial Relations, 1969, 8, 185-194.

Shepard, J. M. Functional specialization, alienation, and job satisfaction. Industrial and Labor Relations Review, 1970, 23, 207-219.

Shepard, J. M. Technology, division of labor, and alienation. Pacific Sociological Review, 1973, 16, 61-88.

Smith, P. C., Kendall, L. M., & Hulin, C. L. Measurement of satisfaction in work and retirement. New York: Rand McNally, 1969.

Svetlik, B., Prien, E., & Barrett, G. Relationships between job difficulty, employee's attitude toward his job, and supervisory ratings of the employee effectiveness. Journal of Applied Psychology, 1964, 48, 320-324.

Turner, A. N. & Lawrence, P. R. Industrial jobs and the worker: An investigation of response to task attributes. Boston: Harvard University Press, 1965.

Walker, C. R. & Guest, R. H. The man on the assembly line. Cambridge: Harvard University Press, 1952.

Walker, J. & Marriott, R. A study of some attitudes to factory work. Occupational Psychology, 1951, 25, 181-191.

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TABLE 1

Mean Scores of Jobs on Job Characteristics Variables

Job Characteristic	Job Number[1]															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Variety	5[2] 5.25	3 5.30	7.5 5.14	7.5 5.14	4 5.29	10 4.70	16 3.00	15 3.20	6 5.22	12 4.25	9 4.82	2 5.60	14 3.50	11 4.69	1 6.38	13 4.18
Autonomy	3 4.82	4.5 4.80	11 4.29	10 4.36	2 5.14	1 5.40	15 4.13	12 4.20	6 4.56	9 4.38	16 3.36	4.5 4.80	14 4.17	7.5 4.50	7.5 4.50	13 4.18
Task Identity	15 3.67	1 6.20	11 4.14	5 4.92	2 5.86	3 5.80	14 3.80	7 4.80	8 4.78	10 4.63	16 2.55	12 4.00	9 4.67	4 5.00	6 4.88	13 3.91
Feedback	12 4.17	5 4.90	14 3.86	4 4.92	6 4.86	1 5.50	8 4.73	9 4.67	7 4.78	15 3.75	16 3.64	13 4.00	11 4.50	3 5.19	2 5.25	10 4.55
Friendship Opportunities	4 5.50	15 3.90	14 4.00	10 4.79	16 2.57	5 5.40	1 6.73	3 5.67	11.5 4.44	13 4.13	9 4.82	7 5.20	12 5.83	11.5 4.44	8 4.88	6 5.27
Dealing with Others	1 7.00	3 6.20	14 4.29	4 6.08	5 6.00	8 5.60	15 4.27	11 4.60	9 5.22	16 3.25	12 4.55	2 6.40	10 5.00	7 5.63	6 5.88	13 4.36
Prestige (Craft Reference Group)	3 4.92	5 4.50	10 3.29	6.5 4.29	6.5 4.29	4 4.90	13 2.53	15.5 2.33	14 2.44	11 2.88	12 2.82	1.5 5.00	15.5 2.33	8 3.50	1.5 5.00	9 3.45
Prestige (All Jobs as a Reference Group)	2 4.58	5 4.00	9 3.43	7 3.79	6 3.86	3 4.40	11 2.93	14 2.73	16 2.22	15 2.63	8 3.45	1 4.60	12 2.83	10 3.25	4 4.38	13 2.82
N	12	10	7	14	7	10	15	15	9	8	11	5	6	16	8	11

[1] See Table 3 for the titles of jobs that correspond to the job numbers shown here.

[2] Ranks are shown in script type.

TABLE 2

Interitem Rank-order Correlations: Job Characteristics Variables[1]

	Variety	Autonomy	Task Identity	Feedback	Friendship Opportunities	Dealing with Others	Prestige (Craft Reference Group)	Prestige (All jobs as a reference group)
Variety	—	.63*	.30	.19	-.55*	.73**	.75**	.65**
Autonomy		—	.55*	.46	-.36	.68**	.70**	.63*
Task Identity			—	.78**	-.45	.36	.24	.19
Feedback				—	-.06	.39	.33	.29
Friendship Opportunities					—	-.11	-.19	-.01
Dealing with Others						—	.71**	.77**
Prestige (Craft Reference Group)							—	.89**
Prestige (All jobs as a reference group)								—

[1] $N = 16$

*$p < .05$

**$p < .01$

TABLE 3

Mean Scores of Jobs on JDI Subscales

Job Title	JDI Subscale				
	Work Itself	Co-workers	Super-vision	Pay	Promotion Prospects
1 Deskman (N = 16)	*1★* 39.81	*12* 39.13	*7* 38.50	*11* 13.13	*14* 13.00
2 PBX Installer (N = 29)	*2.5* 37.86	*5* 41.41	*12* 36.62	*15* 9.72	*11* 19.03
3 PBX Repairman (N = 29)	*2.5* 37.86	*4* 41.76	*15* 32.55	*13* 11.93	*15* 10.41
4 Station Installer (N = 70)	*7.5* 34.71	*2* 43.66	*4* 40.39	*9* 14.34	*7* 20.23
5 Station Repairman (N = 25)	*4* 37.44	*1* 45.72	*13* 35.92	*7* 15.92	*9* 19.58
6 Line Assigner (N = 55)	*5* 36.32	*10* 40.11	*3* 40.49	*6* 16.51	*8* 19.86
7 Supplyman (N = 19)	*16* 22.11	*9* 40.16	*9* 37.37	*8* 14.42	*4* 25.58
8 Messenger (N = 13)	*12* 30.39	*6* 41.31	*1* 47.39	*1* 28.15	*1* 38.62
9 Building Mechanic (N = 14)	*9* 33.29	*11* 39.93	*8* 37.71	*12* 12.57	*16* 10.14
10 Splicer (N = 69)	*7.5* 34.71	*3* 43.65	*11* 36.78	*16* 9.33	*12* 16.38
11 Lineman (N = 34)	*10* 32.94	*7* 41.24	*14* 35.15	*14* 10.71	*3* 27.00
12 C. O. Equipmentman (N = 54)	*14* 28.50	*14* 36.85	*10* 37.28	*10* 14.15	*13* 14.59
13 Frameman (N = 26)	*15* 25.50	*16* 35.81	*16* 32.54	*5* 18.85	*2* 28.15
14 Plant Service Clerk (N = 53)	*13* 28.80	*8* 40.76	*6* 39.47	*3* 21.25	*5* 23.77
15 Plant Reports Clerk (N = 29)	*6* 34.93	*13* 38.86	*2* 43.93	*2* 23.10	*6* 22.21
16 Reports Clerk (N = 50)	*11* 32.82	*15* 36.63	*5* 40.04	*4* 18.90	*10* 19.33

*Ranks are shown in script type.

TABLE 4

Interitem Rank-Order Correlations: JDI Subscales

	1 Work	2 Supervision	3 Co-workers	4 Pay	5 Promotion Prospects
1 Work Itself	——	-.02	.41	-.38	-.54*
2 Supervision		——	-.15	.60*	.18
3 Co-workers			——	-.37	-.04
4 Pay				——	.58*
5 Promotion Prospects					——

[1] N = 16

*p < .05

TABLE 5

Relationships Among Job Characteristics and JDI Subscales[1]

JDI Subscale	Job Characteristics							
	Variety	Autonomy	Task Identity	Feedback	Friendship Opportunities	Dealing with Others	Prestige (Craft Reference Group)	Prestige (All Jobs as a Reference Group)
Work Itself	.56*	.56*	.30	.12	-.53*	.35	.50*	.40
Supervision	-.04	.19	.23	.57*	.34	.21	.27	.11
Co-workers	.05	.10	.38	.05	-.64**	-.08	-.08	-.10
Pay	-.23	-.05	.25	.51*	.50*	.07	-.01	.02
Promotion Prospects	-.53*	-.50*	.08	.20	.50*	-.20	-.37	-.13

[1] N = 16

*p < .05

**p < .01

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